

ABSTRACT OF THE DISCLOSURE

A power supply assembly (10) specifically designed to supply a bias voltage to a diaphragm (34) located on an electrolytic or electrostatic speaker(s)(32). The assembly (10) produces the bias voltage from an audio signal derived from an audio amplifier (30). Thus, a direct connection to a utility power source is not required. The assembly (10) is comprised of five major circuits: a rectifier and filter circuit (12) which converts the input audio signal to a regulated d-c current, an adjustable regulator circuit (14) which is applied the regulated d-c current and produces a regulated direct-current voltage, a d-c to a-c inverter circuit (16) which receives the regulated d-c voltage and produces a high voltage a-c, an eight-times multiplier and rectifier circuit (18) which receives the high-voltage a-c and produces a regulated high voltage d-c, and a current limiter circuit (20) which receives the regulated high voltage d-c and produces the bias voltage which biases the diaphragm (34).

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